

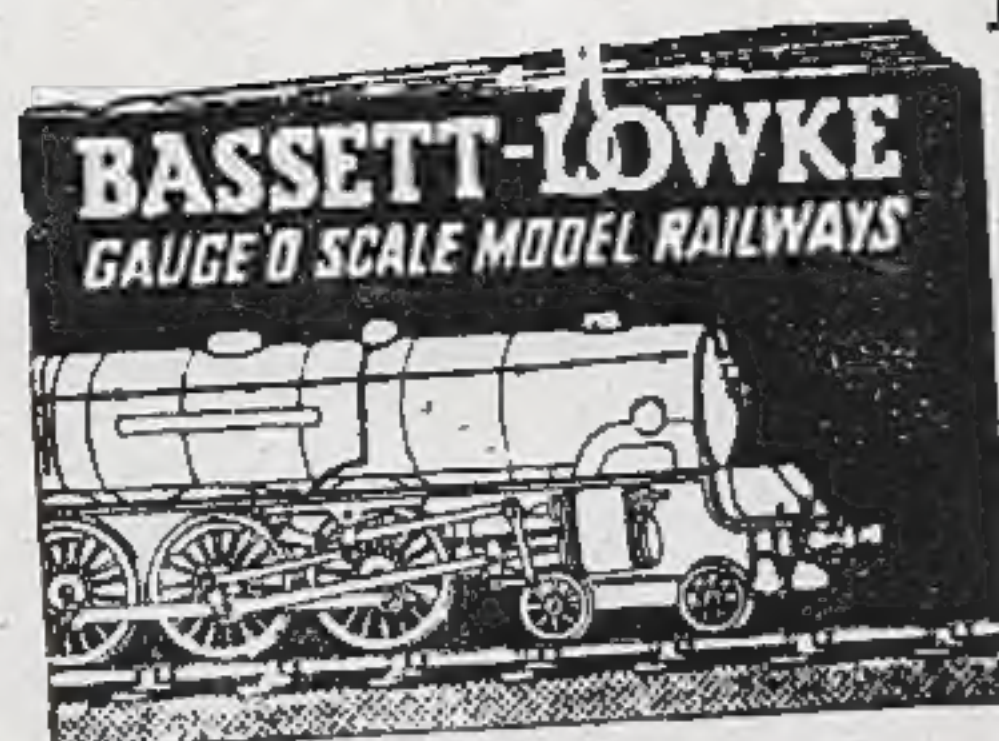
The **MODEL RAILWAY NEWS**

VOL. 24. No. 277. JANUARY 1948.



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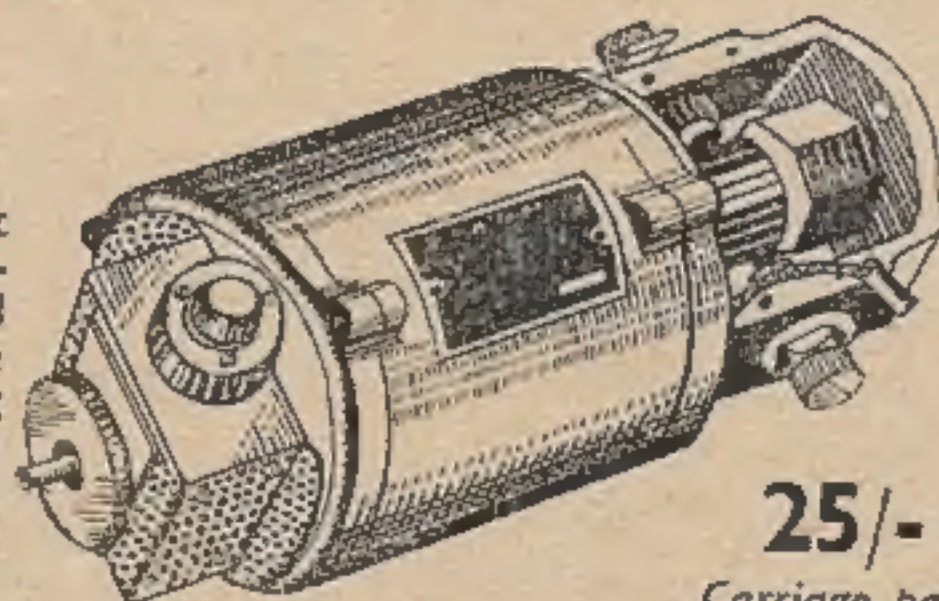
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THE MODEL RAILWAY NEWS

23, GREAT QUEEN STREET, LONDON, W.C.2

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The "M.R.N." RENEWED

THIS issue will show that the "M.R.N." has, in locomotive parlance, been "renewed" rather than "rebuilt," and its appearance, in consequence, is considerably changed. The time for some such change was long overdue; the old format was too much of a reminder of the lean war-years which are best forgotten where our hobbies are concerned. However, with paper restrictions persisting in making their unpleasant presence severely felt, our problem has been to decide just how to arrange for a larger size of page, so often urged by readers recently, and combine it with better presentation and improved appearance without overstepping the limits of the present meagre quota of paper. Our solution of the problem is perfectly apparent in this issue; the old cramped appearance has given place to a spacious effect which, we hope, is generally easier on the eye, gives scope for the better treatment of drawings, and, at the same time, ensures that the text shall be comfortable to read. Another important point is that railway pictures, of full-size as well

NOTES of the MONTH

as model subjects, are so often wider than they are high, and, therefore, the "Landscape" style now brought into use in the "M.R.N." for the first time, is the logical development from the "Portrait" shape previously used.

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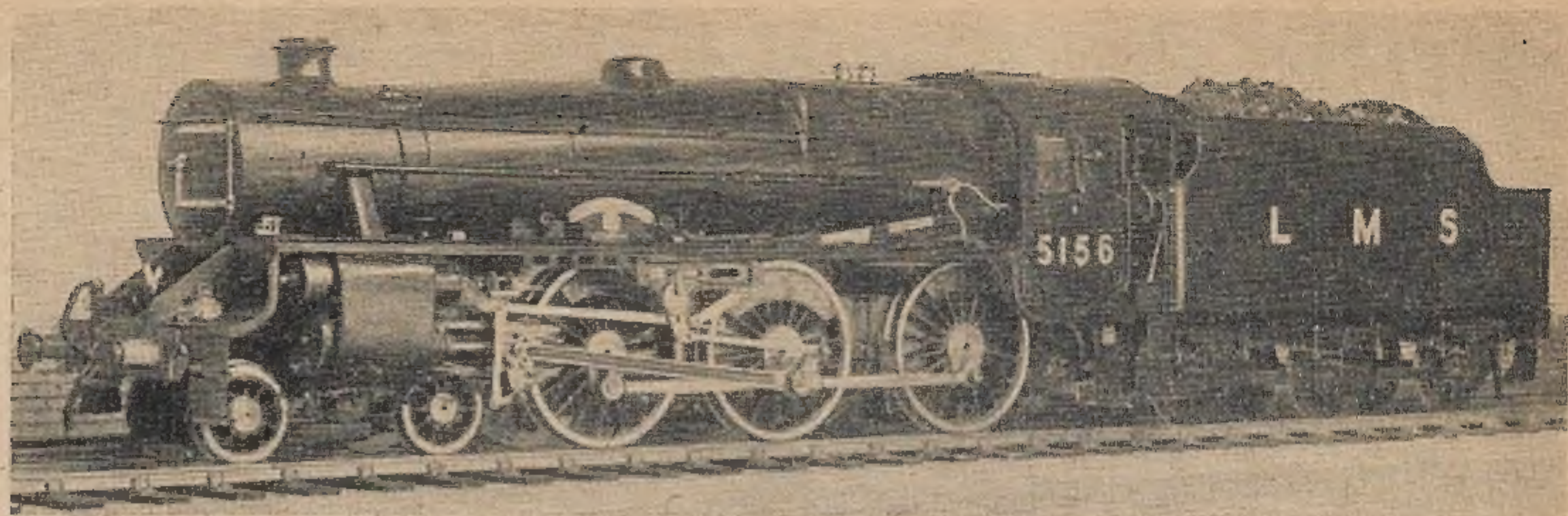
WE regret that the restriction of paper supplies is still so severe that, once again, we were obliged to omit the Index which would normally be printed with the last issue of a volume. An Index for Volume 23 has been prepared, however, and a strictly limited number will be printed as soon as possible. In the meantime, would any reader desiring to receive a copy be kind enough to send us a stamped self-addressed envelope large enough to take an unfolded copy of THE MODEL RAILWAY NEWS, and an Index will be forwarded as soon as it is ready. Envelopes should be addressed to "The Sales Manager," Percival Marshall & Co. Ltd., 23, Great Queen Street, London, W.C.2.

GAUGE "1"

L. M. S.

CLASS 5

4-6-0 LOCO



"AYRSHIRE YEOMANRY"

Built and Described by
E. R. MORTEN

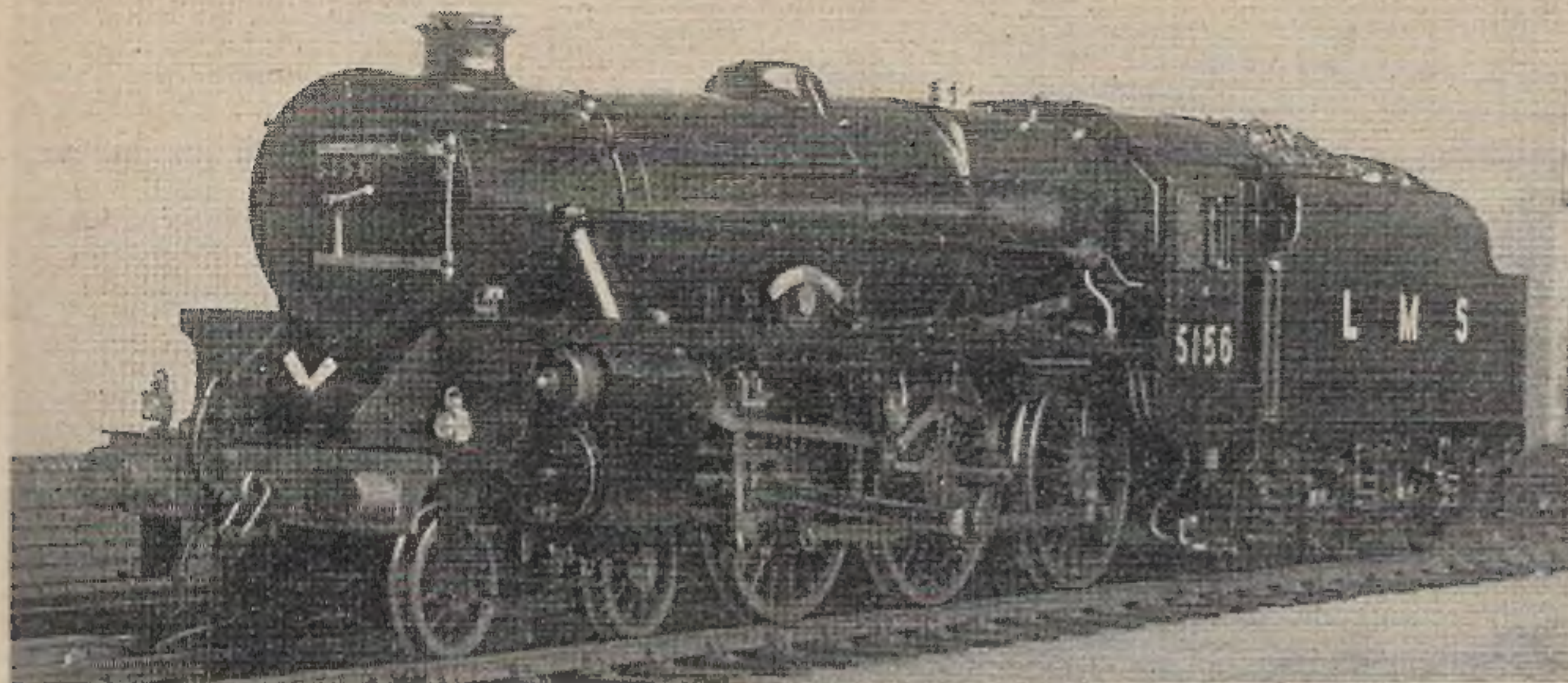
THE accompanying photographs are of the most recent locomotive for working on the Corbar branch; a gauge "1" 10-mm. scale line, which readers may remember was described in May, 1942.

The line is partly outdoors and partly indoors, and steam is the main source of motive power.

The indoor section has been drastically altered since its description, and I hope to describe it later in its new form.

L.M.S. Class 5, 5156, *Ayrshire Yeomanry*, which was exhibited at the recent *Model Engineer* Exhibition, is mainly a wartime production, built when very little suitable material was available. The only purchased parts were wheel and cylinder castings. Other parts, even down to nameplates, were home constructed.





THEFT AT LYMINGTON

WE regret to have to announce that, in connection with the exhibition of models arranged by the Southern Federation of Model Engineers, as an attraction at a carnival held at Lymington, Hants, a 4-mm. scale S.R. "Schools" Class locomotive was stolen. The model is distinctive in that it is silver-plated all over and has *two* brake standards on the tender. It is approximately 2 in. high, 9 in. long over engine and tender, and stands on a 12-in. length of model track fixed to a stained wooden base; it is fitted with a small 6-volt electric motor, took 18 months to build, and is 10 years old.

The Lymington Society of Model Engineers is offering a reward of £5 to anyone who will supply information which will lead to the recovery of this model to the owner, Flight-Lt. G. W. Weeks, of the Andover Society of Model Engineers. If any reader knows of the present whereabouts of the model, or can give any information that will help in its recovery, he is asked to get into touch immediately with either Mr. Baker, "Verona," Burrards Grove, Lymington, Hants; or Mr. R. Pemble, 14, Weyhill Road, Andover, Hants. There is a possibility that the model may be displayed at some exhibition or it may be offered for sale, and readers are requested to be kind enough to keep a sharp look out for it.

The engine is spirit or paraffin fired, with a water-tube boiler, this, in my opinion, being the most suitable for operating on a line like the Corbar branch.

The usual fittings, such as regulator, screw reverse, blower valve, water gauge, firedoor, pump by-pass valve, lubricator and valves, and whistle valve, are located in the cab; and all fittings in frequent use are made easily accessible.

The boiler is fed either by hand pump in tender, or, in normal use, by an axle-driven pump with by-pass; both feeding under the top feed dome. Pop-valves blow at 60 lb./sq. in.

A deep-note whistle is fitted under the boiler, and fed from a valve on the cab roof, through piping inside the boiler casing, and a clean clear note is obtained at a touch on the valve.

Full Walschaerts valve gear is fitted, operating slide valves; and 5156 runs fastest and best almost in mid-gear.

All wheels are sprung, driving axles are hollow, and most external detail is fitted on both engine and tender. It will be noted that provision is made for both snow plough and staff exchange apparatus.

The engine has already run for many hours; she is clean to operate, can run for long periods without attention, and yet will stand by without unnecessary fuss; valuable points in timetable and similar running, which are the main features of the line.

ALLOTRIA No. 6.

BY "1121"

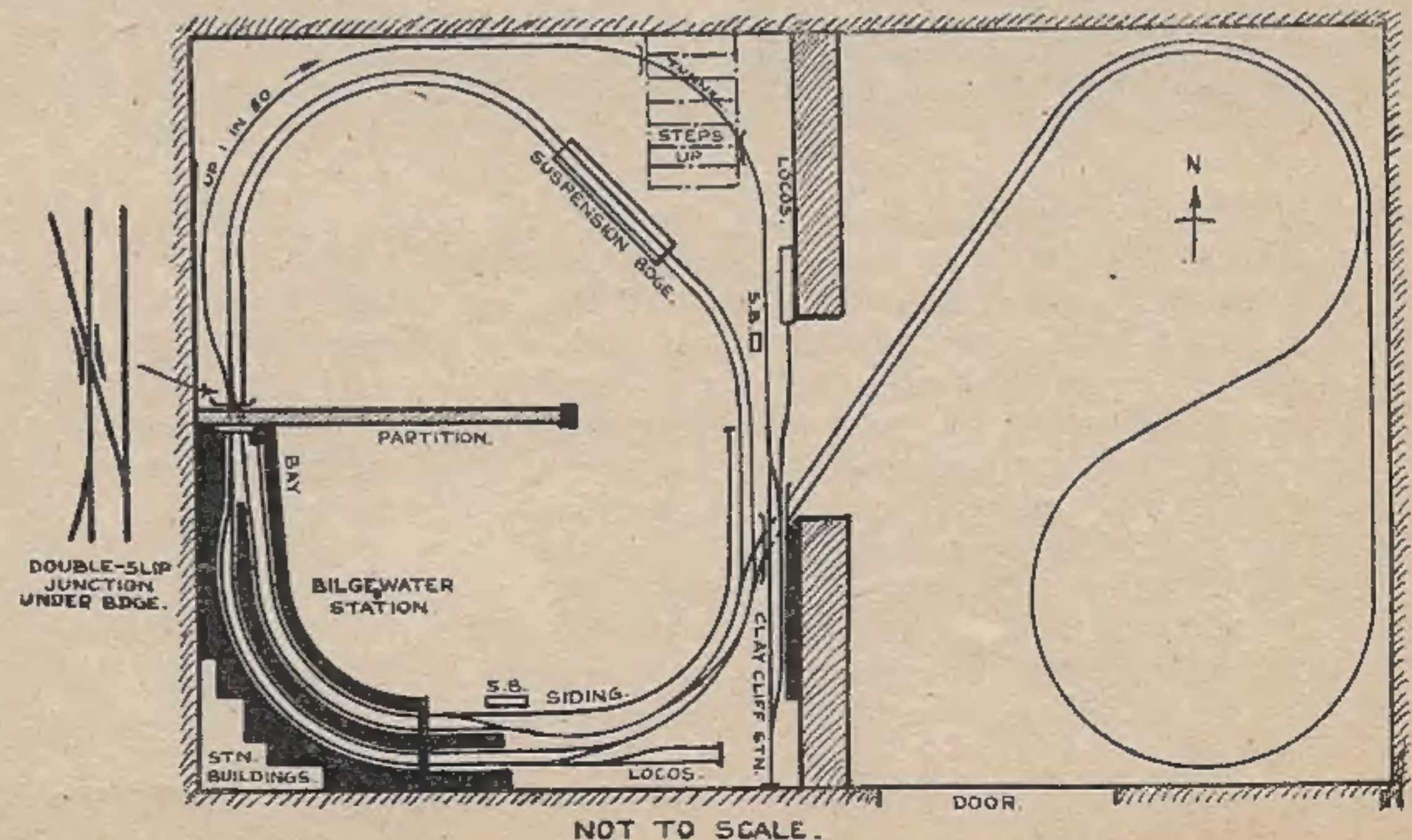
IN October, 1940, I was evacuated to Somerset for business reasons, and it was not long before the urge to construct a track made itself felt. A fair amount of rolling-stock and locomotive power, mostly home-made, had been taken along, and its unpacking brought on a desire to see some wheels going round.

I decided to run the track round the walls of a disused stable. It had a garage adjoining, which I proposed to press into use as an extension. The plan, on the right, shows the buildings and the plan which was evolved for the track. The whole layout was not completed by the time it became necessary to dismantle it all and return to London, but a considerable amount *was* done, and its construction and running did a lot to provide the weary war years with a little light relief.

It will be seen that the main station, Bilgewater, was a fairly elaborate junction layout, with added interest due to the fact that the whole thing had to be arranged on a curve to get it into the available space. There was only room for about 2 ft. of straight at any point on the main circuit. The track itself consisted of ordinary standard "O" gauge, of a variety of makes, from many different sources, mostly old sections dismantled. There was nothing very original about the construction of the

track, with the possible exception of the sleepers, which were of slightly smaller section than standard sleepers, being Woolworth's narrow flower-labels cut to length, and spaced at 1-in. centres. This helped a lot to improve the appearance of the track. The sleepers were laid on laths, split down

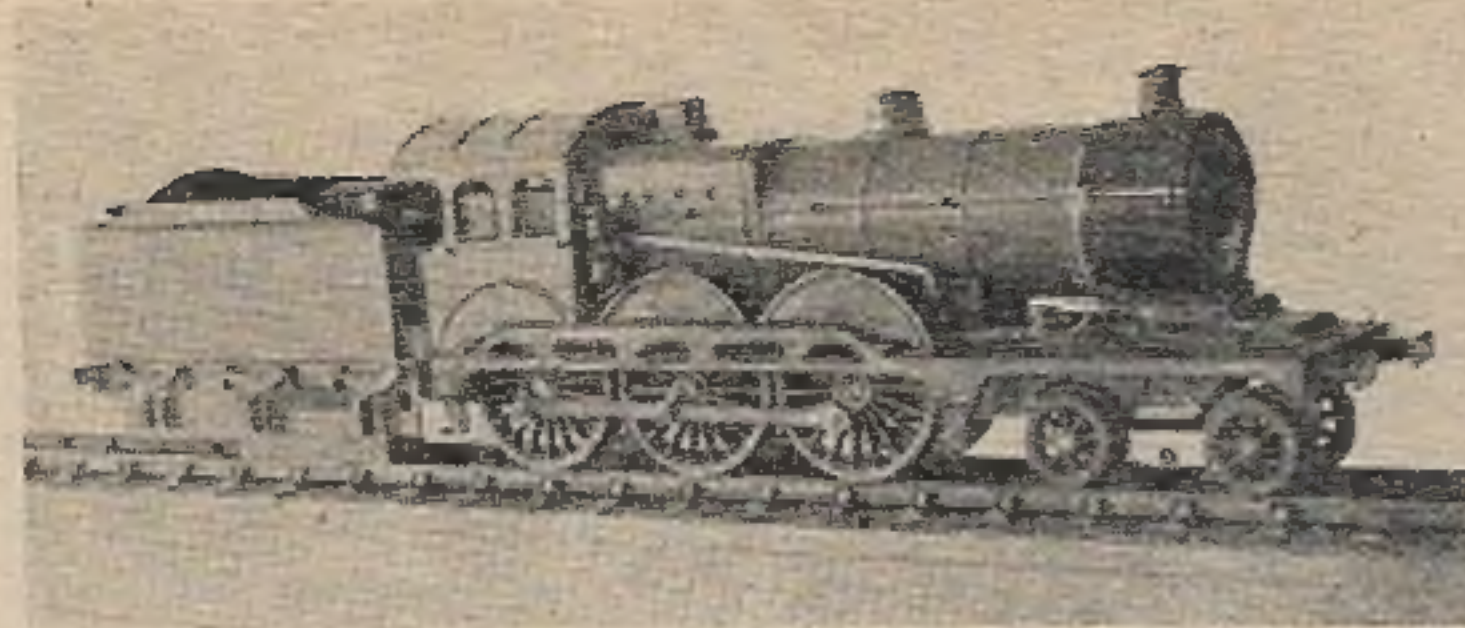
the middle to form narrow battens, and the whole thing was made in sections to facilitate dismantling when the time came, with a minimum of damage. The sleepers, rails and chairs were painted all over with floor stain, subsequently polished off the top of the rail. This gave the sleepers about the right colour, and the rail and chairs a nice rusty appearance. The track was then ballasted with fine chicken-grit, which was rather white, although dust and oil soon toned it down. I remember white ballast being a subject of much controversy in the correspondence columns of THE



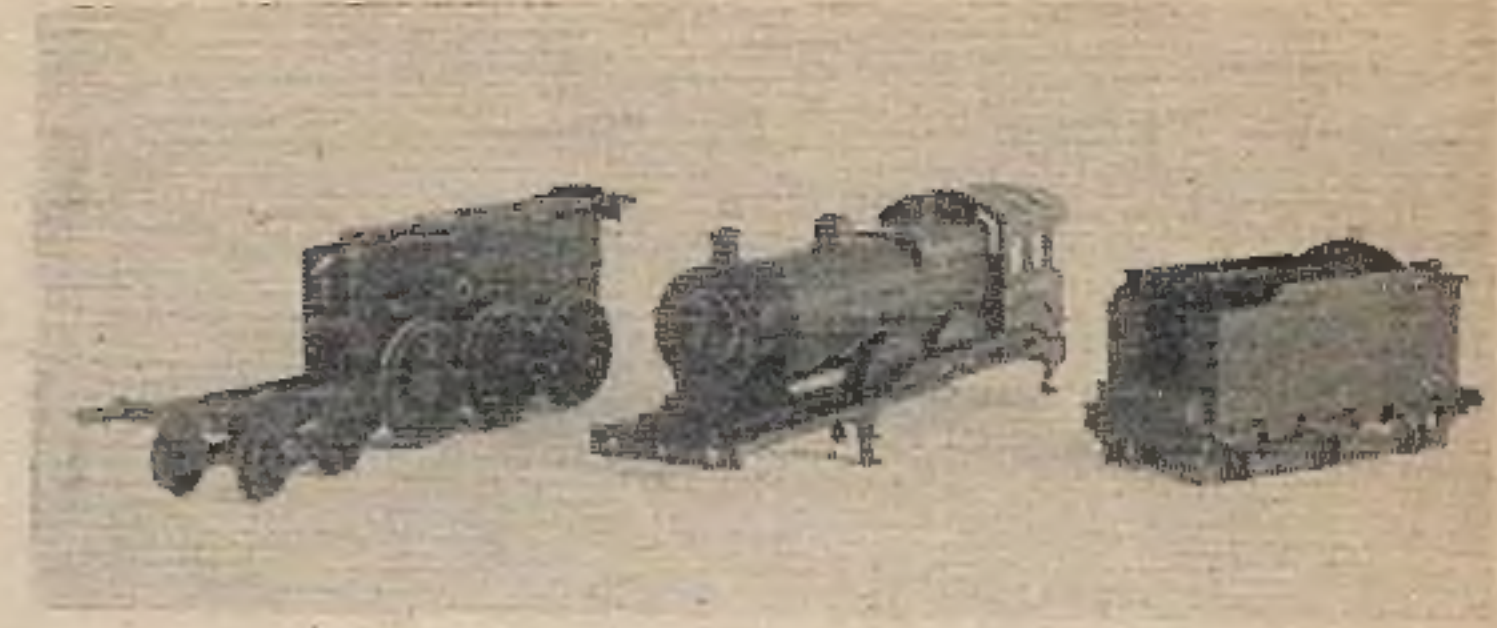
Plan showing buildings in section and the form of the layout evolved



Left :
Some of
the track
work



The loco. assembled



The loco. in parts

MODEL RAILWAY NEWS some years ago, but as I have seen *pink* ballast being laid on the G.W.R. I felt justified in using whatever colour I liked.

Unfortunately, it was not possible to take any photographic views of the line, but a few little sketches have been prepared which should give any interested reader a rough idea of what the track looked like, the one reproduced here is of some of the more interesting pieces of point-work, taken after dismantling and moving.

All the track was laid to the dimensions stipulated by the B.R.M.S. Bureau, which necessitated doctoring of practically all the wheels on my locomotives and rolling-stock. This was a big job, but I have had so much

trouble in the past, trying to produce points and crossings through which they would all run that I decided the work would be worth while. The resulting trouble-free running of a train which grew longer and longer as vehicles were converted, was decidedly encouraging, and other improvements were subsequently effected until any train could be pushed or pulled through any points and crossings by any engine, with no risk of derailment. If you will examine the plan of the track you will see by its snaky nature that this was something of an achievement.

The chief of these other improvements consisted of limiting the side-play allowed to the axles of rolling-stock. In some cases this was excessive, through the solebars having become slightly strained or loose, and was remedied by strengthening them up and setting them further in to the wheels, as necessary. Where this could not be done, for example, in the case of some wagons fitted with axleguards made in pairs, washers were slipped over the axles between the

wheels and the axleguards, and all four-wheeled vehicles, when given only just sufficient clearance to enable the wheels to spin freely, could then be pushed over any part of the track, with *round* buffers, without locking.

Bogie vehicles, of course, are a different proposition, owing to their excessive overhang on sharp curves, and although they were all similarly treated to reduce side-play, it was found necessary to fit them with oval buffers.

The adoption of a reasonably fine wheel standard was found to be of great advantage when construction was begun on an inside-cylinderead steam locomotive, as the increased back-to-back dimension gave another $\frac{1}{16}$ in. between the main frames. This is a lot in "O" gauge, and made the difference between impossibility and success, as will be explained in due course.

Locomotive Building Under Difficulties

The partly-finished locomotive in the

photograph is "O" gauge, clockwork-driven, and was built at a time when I had no workshop equipment available whatever—not even a bench and vice. The whole of the work was done on a piece of three-ply, 1 ft. square, on the kitchen table. The only parts bought were the mechanism and a set of scale wheels. The mechanism is a Bassett-Lowke "Royal Scot" type, and is fitted with a speed control, which it is intended, at some future date when the engine is finished off, to connect up somehow with the tender drawbar, to give automatic adjustment according to whether the locomotive is running up or down hill, whether it is hauling a heavy train or running light, and so on.

The construction of some of the details normally requiring a lathe was dealt with in some of the old "Allotria" notes before the war, but I think some of these ideas could bear repetition in a condensed form, as they may be of use to some of the newer generation of model-builders. More of these details when we come to them.

Some assistance was rendered in filing and drilling various parts by a simple clamp rigged up on the board, as shown in Fig. 1. It is crude, but it is surprising how it can help to hold some of those fiddly bits.

The main point of interest in the design of the model, as distinct from its construction, is the way the bogie is attached. This is carried on a flat strip of spring steel, pivoted on a stretcher between a pair of dummy "main frames," attached, in the form of extensions, to the front of the

mechanism side-plates, as can be seen in the photograph, and secured behind the front buffer-beam by screwing the buffers in place. The whole lot thus comes out, with mechanism and bogie complete, which can be tested and adjusted on the track as a unit without the obscuring effect of the body.

The carcass was built of tinplate, with details such as boiler bands and beading of brass and copper wire, hammered or filed flat or half-round as required. The Westinghouse pump was built up out of tube, washers and wire (Fig. 2), and the Wakefield lubricator is a little square box folded up from brass, with a lid soldered on,

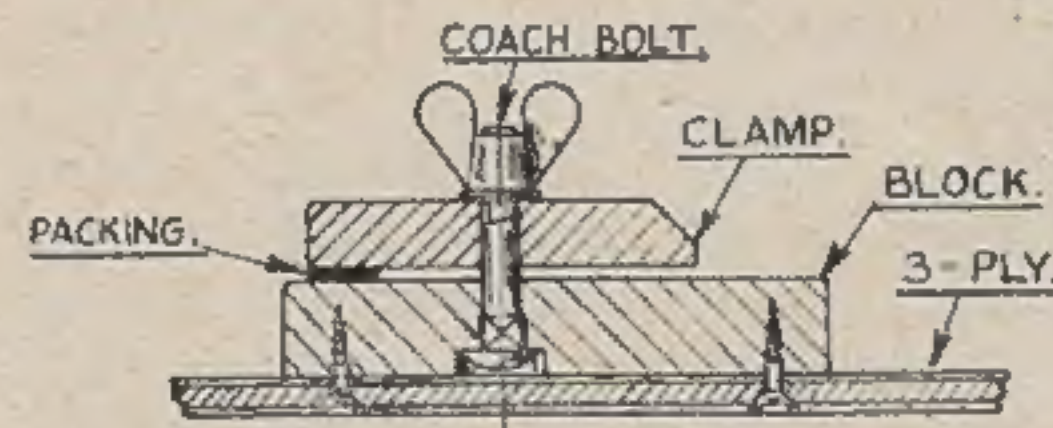


Fig. 1

and was provided with a wheel consisting of a cheese-head screw with the head thinned down and filed to a cross for the spokes, and pushed into a wire ring and soldered up. The various details of this are shown in Fig. 3.

The boiler-mountings call for a certain amount of description. A sectional drawing of the chimney is shown in Fig. 4, from

which it will be seen that it is built up from four pieces. The cap and base are flanged up from annealed brass sheet by drilling a $\frac{3}{16}$ -in. hole and extruding the edges outwards. This operation is performed by driving a centre-punch through while the plate is rested over a hole in a piece of metal or hardwood, or over the end of a piece of tube, about $\frac{3}{8}$ -in. inside diameter. The base is further treated by squeezing it down on to something round, about the same size as the smokebox. Note that the base, before this operation, must be the shape as seen in the *fore-and-aft* view, as distinct from the side view, as indicated in the drawing. The stem of the chimney

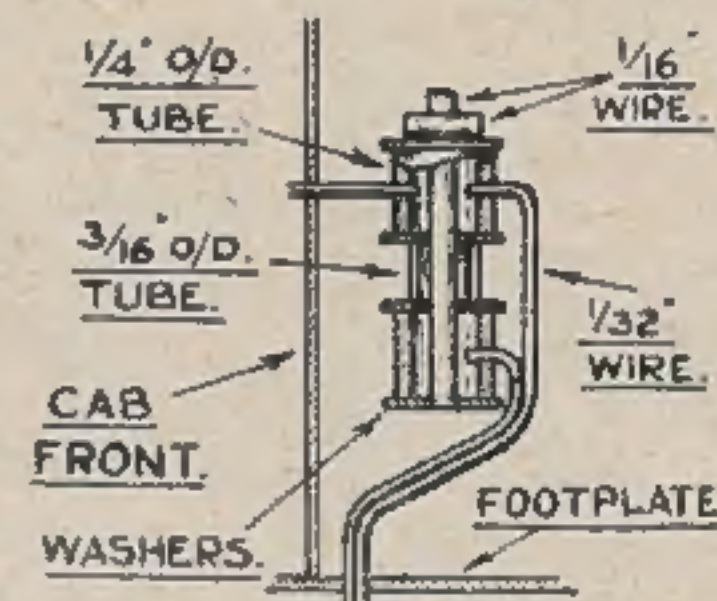


Fig. 2

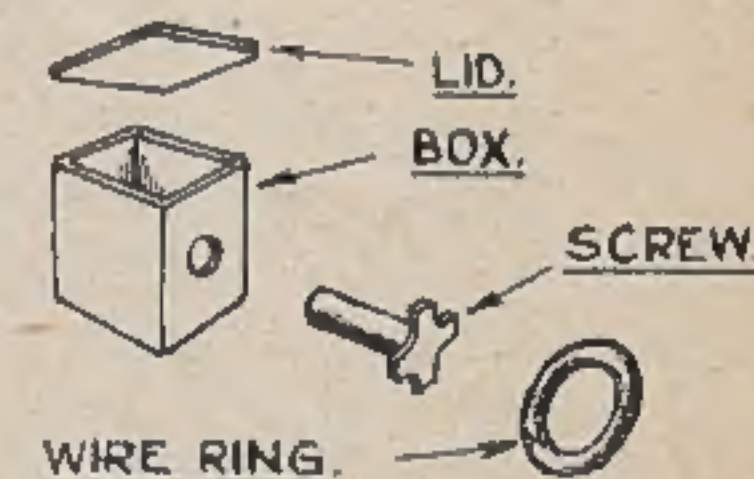


Fig. 3

was rolled up to a taper form from the same sheet brass.

The method of making the dome was the result of much cogitation, and I have never seen or heard of it before. The end of a piece of wooden dowelling was rounded off to a form slightly smaller than the final dimensions required for the dome, and cut off to the right height. This was then

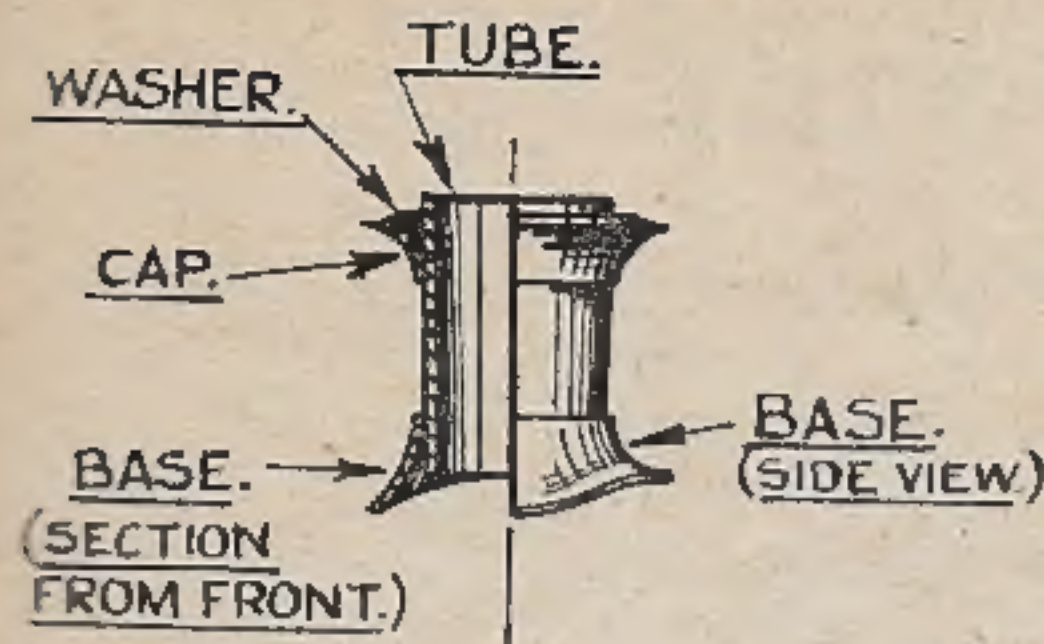


Fig. 4

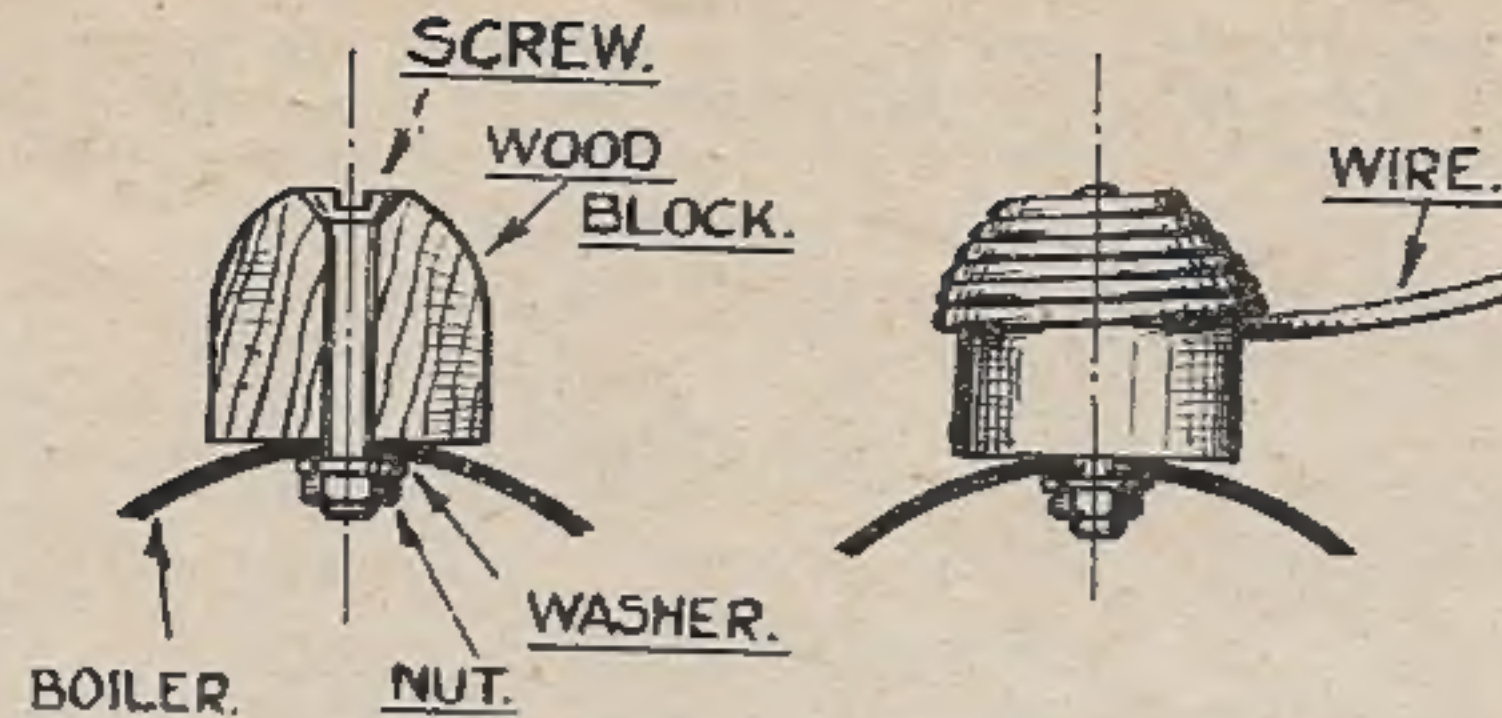


Fig. 5

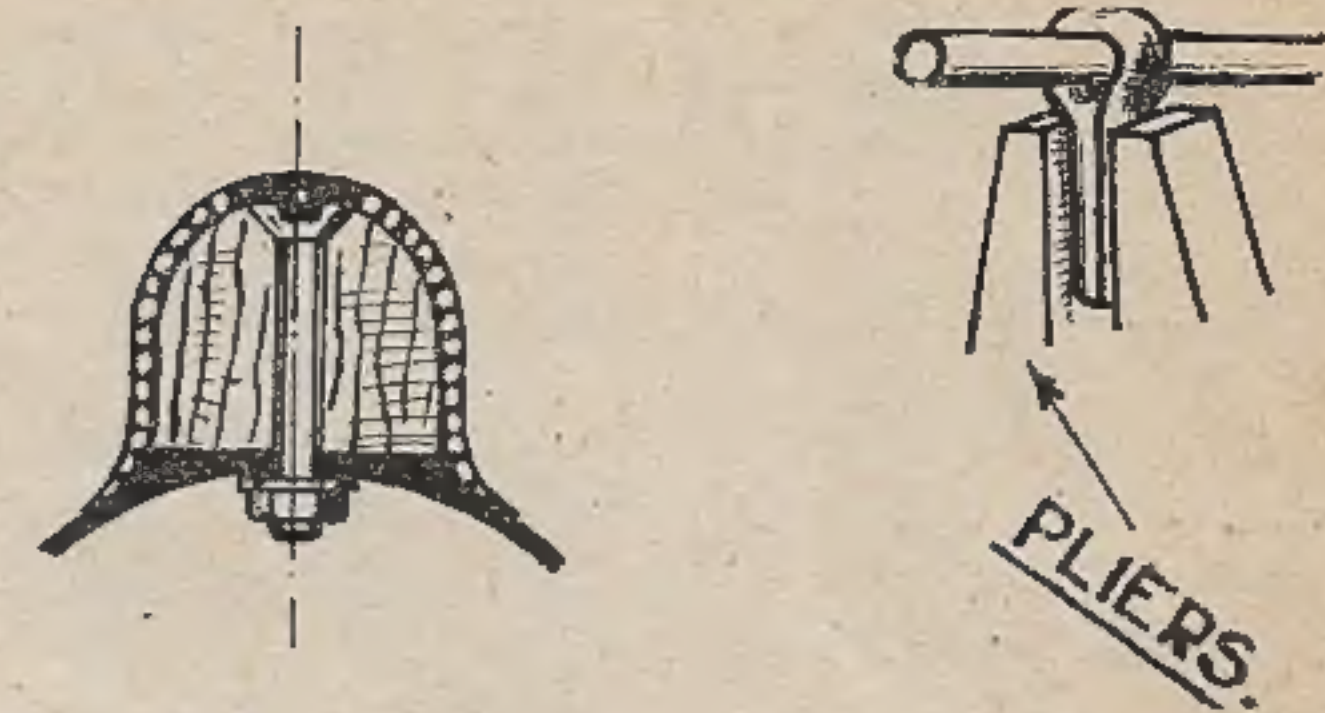


Fig. 6

attached to the boiler by means of a long countersunk screw, about 6-B.A., down through the middle, with a nut and washer underneath. One end of a length of copper wire was then soldered into the cut in the top of the screw, and the wire wound round and round the wooden block until it reached the bottom, and persuaded to blend in with the curve of the boiler and stay put. The whole thing was finally blobbed all over with plenty of solder, and smoothed off with files and emery-cloth. The streaks of solder and copper made it look a bit weird, but after painting it was impossible to tell it from a turned fitting. These various stages are shown in Fig. 5.

The smokebox door was dished up by maltreatment with a ball-pane hammer and smoothed up afterwards with file and emery. Hand-rail-knobs are the time-honoured split pins, which had to be made by filing down wire to the half-round shape, and bending it up with pliers. (Fig. 6.)

The tender contains no very remarkable

features, beyond the fact that the wheels are sprung, or will be when they are in. I have preached springing in these notes years ago, and I am glad to see how many people are finding it worth while. I repeat, that the difference in running, especially over points and crossings, has to be seen (and heard) to be believed. The method adopted in the case of this tender consists of doctoring ordinary commercial cast white metal or brass axleguards. To do this for a tender is easier than for a wagon, as you have the solid frame to which to attach the bits after mutilation.

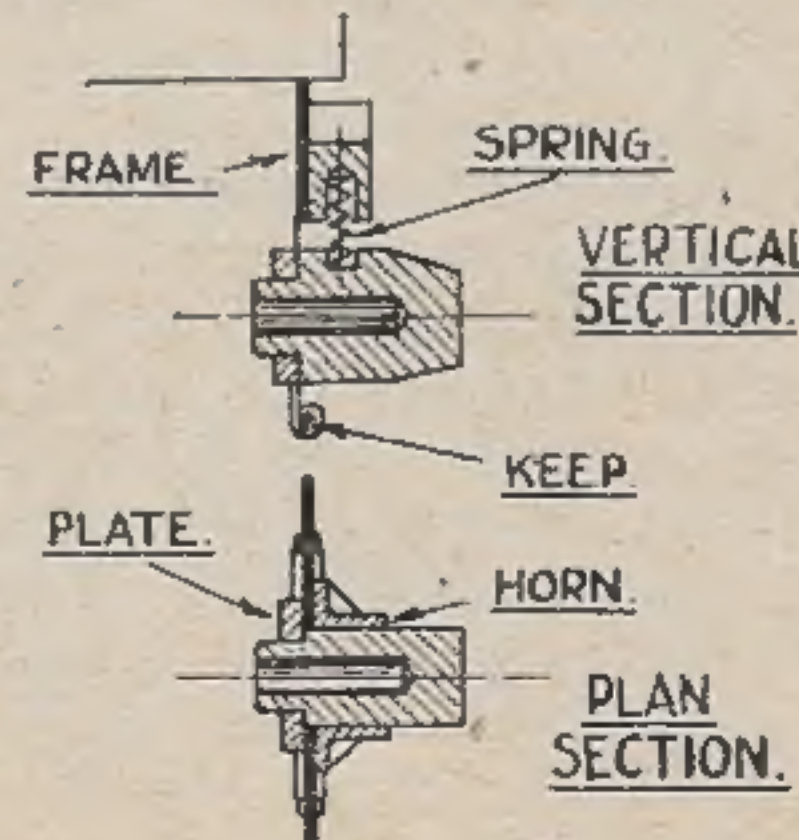


Fig. 7

The axlebox is sawn out from the rest of the casting, using the thinnest saw available, and provided with a small plate on the back with a hole drilled through it to locate on the boss, soldered in position. It projects about $\frac{1}{8}$ in. on either side of the box. The rest of the axleguard is soldered to the frame (white metal may be soldered to tinsplate without running away if you use a very hot iron and a certain amount of care and patience) and a slot cut in the frame to match the horns. The remains of the keep, as represented on the casting, are removed, and a "working" keep provided, of the right pattern. A small coil spring is inserted between the axlebox and the dummy spring-buckle, in blind holes drilled in each. Details are shown in Fig. 7.

The "top works" of the tender are, as far as I know, complete, and entailed quite a fair amount of work. It was fiddly, but straightforward, and calls for no special comment.

ABOUT UNDER-BASEBOARD WIRING

by
J. H. AHERN

PLENTY has been written in one place and another concerning the basic circuits used in wiring up a model railway, and every reader must be familiar with the usual conventionalised method of presenting such circuits in diagrammatic form. The wires are represented by ruled pen lines and the various components, switches, rheostats and the like are indicated by draughtsman's symbols. All this is so simple as applied to an ordinary model railway that the beginner should not have much difficulty in following it out, but there is quite a long way to go from a wiring diagram on paper to the solid three-dimensional realisation of the scheme. There is, in fact, another aspect of the subject which may be called the practical or mechanical as opposed to the theoretical. The beginner, it may be assumed, wants to know what sort of wire to obtain, and what means to employ to secure it in place under the railway, and several other things which a wiring diagram does not reveal.

I shall describe here how the wiring of the Madder Valley is carried out, and it may be said at once that the arrangements are essentially the same whether three-rail or two-rail is used, except that with the latter there is likely to be less wiring and fewer connections.

It is the accepted practice to employ what are usually called main feeders:

wires of considerable current capacity which start from the control panel and follow the tracks along on the underside of the baseboard. At various points—for sectioning purposes, or simply to prevent voltage drop through the fishplate joints between the rails—we solder short feeder wires of lighter gauge to these main feeders and bring them up through small holes drilled in the baseboard for attachment with solder to the rails, with the addition, when required, of small push-pull section switches. That is the basic system. If the whole of the railway is controlled from one panel there will be one pair of main feeders, but if it is divided into two or more sections there will, of course, be two or more pairs of feeders.

On the Madder Valley the main feeders are lengths of the stranded copper aerial wire which is sold in twenty-five, fifty, and 100 ft. coils at all wireless shops. There is no need to use insulated wire because it is easy enough to fix it so that the two feeders could never come in contact, and it is more convenient that they should not be insulated. Fig. 1 shows how these feeders are carried under the baseboard; the reader

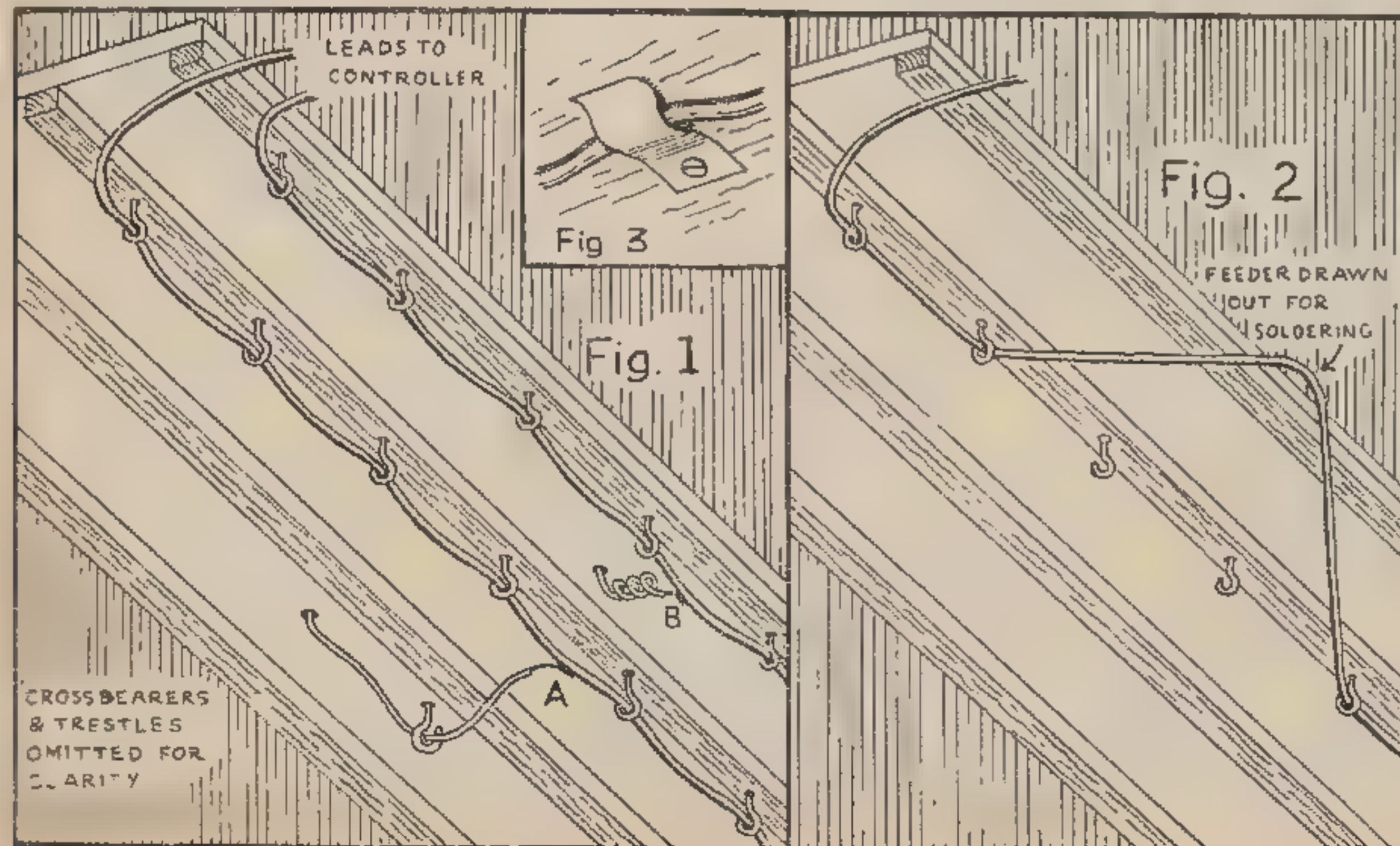
will understand that he is supposed to be looking up at the baseboard from somewhere near floor level. The trestles and crossbearers have been omitted to avoid loading the drawing with unwanted detail. All that is required is a good supply of small screw hooks, which can be obtained in brass or iron from any ironmonger or hardware shop. I prefer the brass ones because they look nicer. These are just screwed up into the underside of the baseboard, and the main feeder wires are looped over them. One of these main feeders (the one which way back in third-rail days we styled the “positive” side) is hung close to the front edge of the baseboard; the other is hung about eight or nine inches back from the edge. Thus there is a more than adequate margin of safety against accidental shorts. The hooks may be installed at intervals of about a foot or fifteen inches.

Now the main feeders should not be drawn tightly through the hooks. You will have occasion, from time to time, to solder sundry short feeder wires to them, and if it were necessary to squat on the floor under the baseboard it would be a very uncomfortable business indeed. And sooner or later you would certainly drop a blob of molten solder on your clothes, if not in your eye! It is probable that at least half the soldered joints would be more or less faulty for the simple reason that it is almost

impossible to work with a soldering-iron in such a cramped position. So we leave about a foot or two of slack in our main feeders and then when a soldered joint is to be made it is only necessary to unhook the wire from two or three of the hooks and utilise the slack to pull it out clear of the baseboard, as in Fig. 2. Then we can work in comfort and a normal attitude, and in due course the feeder wire is just slipped back in place over its hooks and given a pull so that the slack is nicely distributed. Of course, the wiring is not so pretty to look at as it would be if it were carried

slick and tight like an electrical diagram, but it is not intended to be looked at, and it happens to be exactly one hundred per cent. practical.

For the short section wires something lighter than the stranded copper aerial wire can be used, and it is advisable for these to be insulated, because sometimes it is impossible to keep leads on opposite sides of the circuit from crossing or running close together. And to assist in tracing out connections it is obviously desirable that wires on one side of the circuit should be a different colour from those on the other.

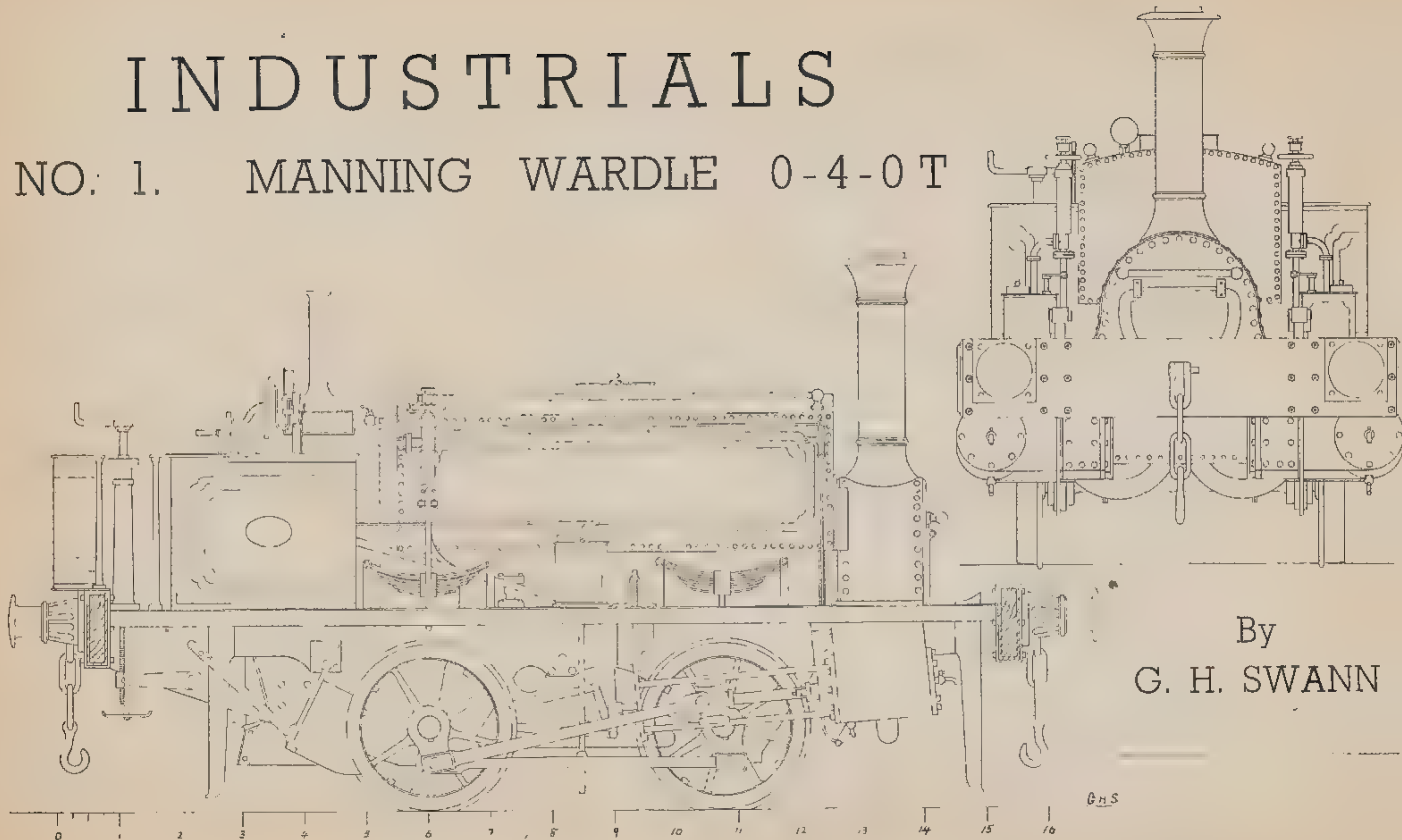


Ordinary cotton-covered bell wire can be used, or the new form of bell wire which is sheathed in plastic. On the Madder Valley the latter is now used almost exclusively, red for one side of the circuit and black for the other. Stranded wire is not recommended for this purpose because it is a little difficult to solder it neatly and unobtrusively to the rails. If a stranded wire must be used for any reason, twist the strands together and tin them for about half-an-inch before attempting to solder them to the rail. For these short wires, as with the main feeders, we allow sufficient slack to allow the wiring to be drawn out when required without breaking any connections. They are carried on hooks, like the main feeders, and the slack is disposed of by not taking them direct to the place where they are wanted, but by leading them round two sides of a rectangle, as at A in Fig. 1. Another way to take up the slack is to twist it into a spiral round a pencil, as at B. Naturally, you use rather more wire than would be needed if everything were fixed rigidly and permanently, but it is worth it for the facility with which alterations and additions can be made.

In case the reader does not like the idea of the hooks and thinks the result may be rather untidy, an alternative is shown in Fig. 3. It would not take long to make up a supply of spring clips from strip brass, designed for attachment to the baseboard by means of one screw. The wire could be sprung in or out without disturbing the screw.

INDUSTRIALS

NO. 1. MANNING WARDLE 0-4-0 T

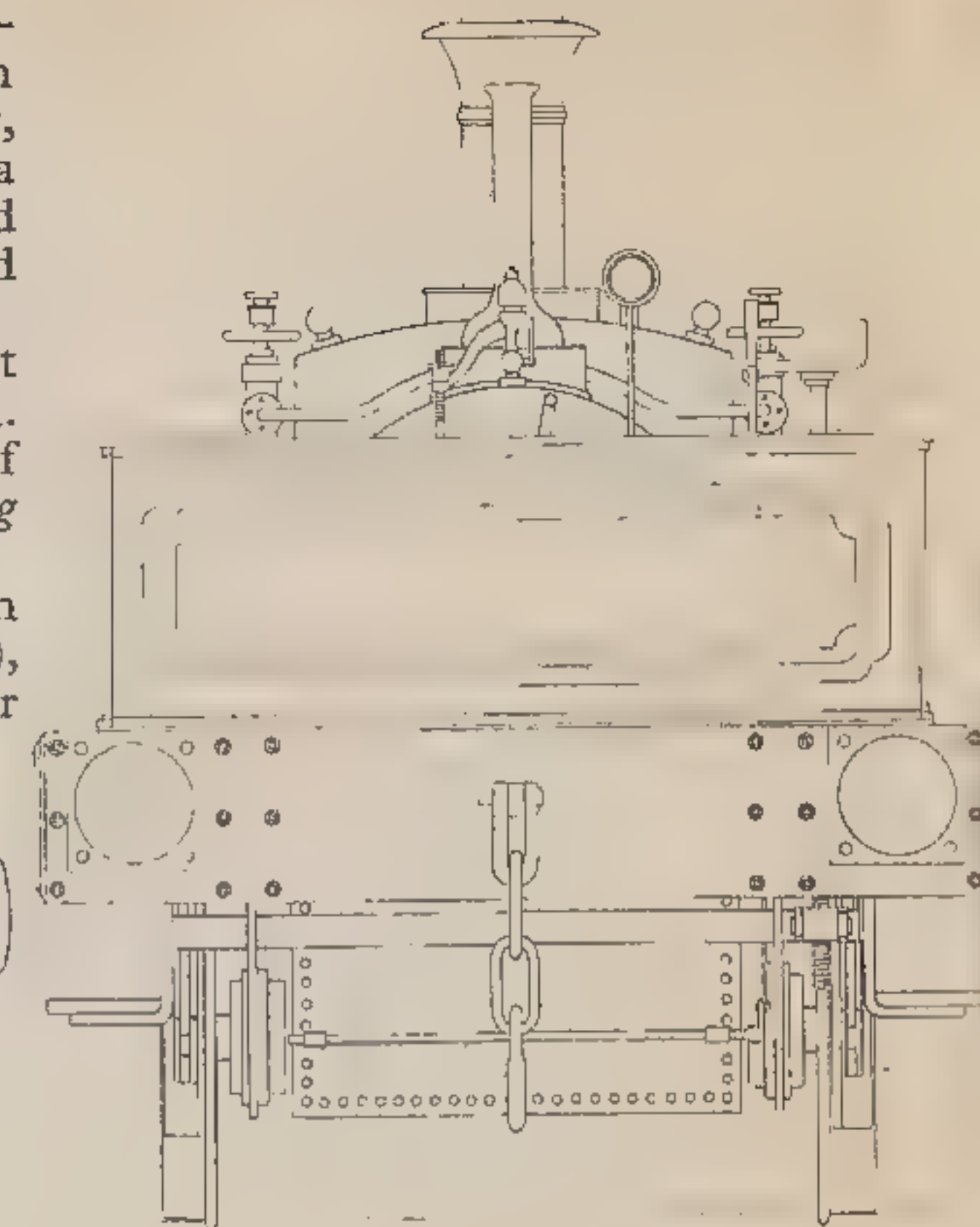
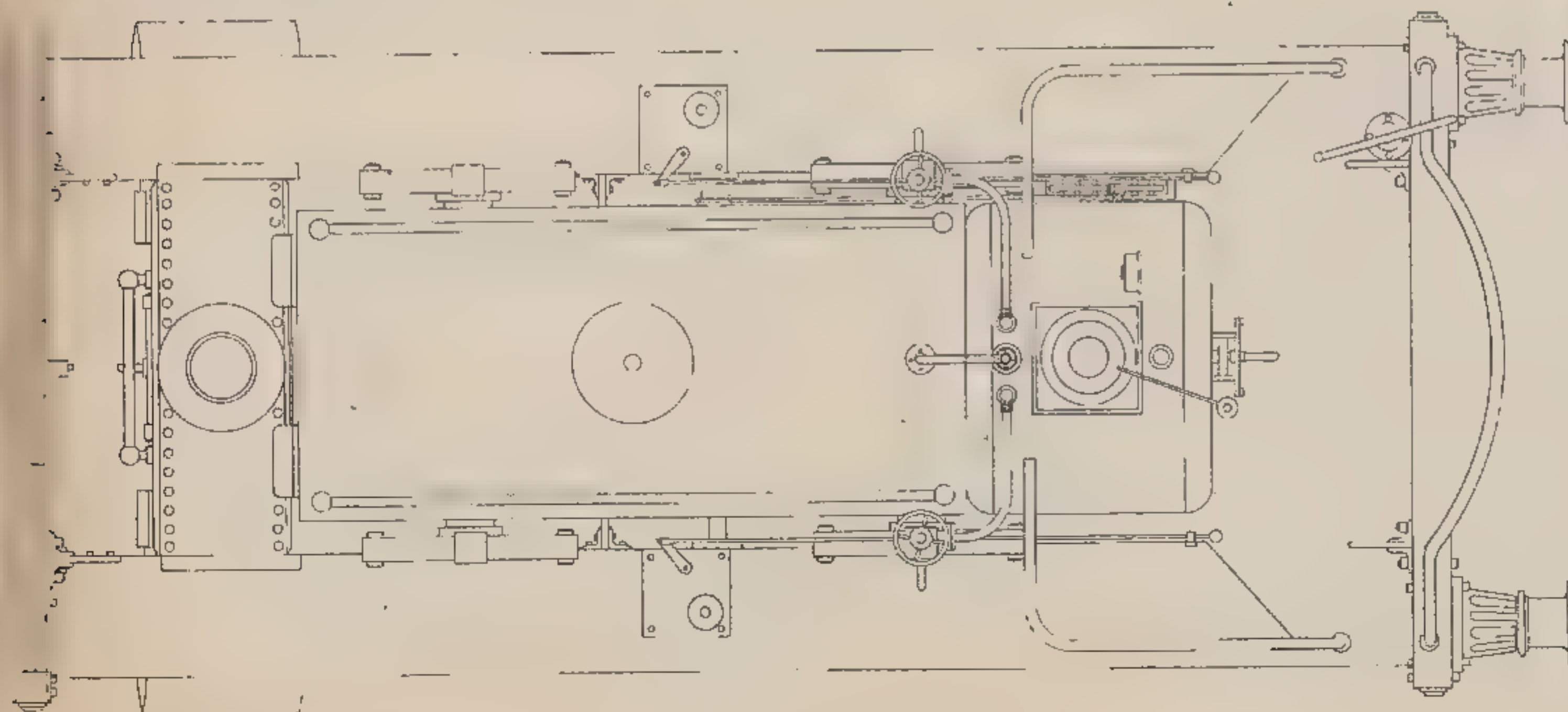


By
G. H. SWANN

THE accompanying drawings illustrate a little engine which was a show model in its day—built by Manning Wardle & Co., of Leeds, for the International Exhibition at South Kensington, in 1862—and which would not be out of place in a present-day small scale layout, even if only in dummy form, say, standing, drab and rusty, axle-deep in nettles, at the end of a siding of some out-of-date old-fashioned industrial concern occupying a suitable line-side odd corner—for instance, a very unprogressive old family iron foundry, the yard littered with disused mould boxes.

Of course, much detail can be modified or omitted altogether in the smallest scales, but if the outline is copied faithfully, the highly distinctive character of the engine will be secured. Passengers riding past on the main line will be able justifiably to exclaim, as they catch sight of her on the private siding, not merely “there’s a contractor’s engine,” but “*there’s a Manning Wardle!*”

She weighed only $10\frac{1}{2}$ tons in trim, but in his “Exhibited Machinery of 1862” (available in or through any public library for the benefit of anyone whose curiosity extends to her innards), D. K. Clark spoke well of her labours in hauling machinery into the exhibition grounds under his superintendence.



The builders' number was 60 of 1862, these particulars appearing on the oval builders' plate. The plan especially shows the individuality of the curved backsheet and footplate—a very important feature of the distinctive assembly, and one which might not be quite clear from the side elevation on page 10.

RAILWAY TOPICS — By

J. N. MASKELYNE, A.I.Loco.E.

MY daily journey to and from our offices entails, as I believe most of my readers are now aware, a return trip on the G.W.R. between Maidenhead and Paddington. This route passes by a number of industrial establishments, such as gas-works, factories, etc. ; and at some of these there are to be seen some attractive industrial locomotives employed on the somewhat monotonous and humble duty of "works shunter." I am hoping that I may have opportunities of describing and illustrating most, if not all, of these engines, in due time ; for they are all of some interest and I have come to love most of them.

One of them, to me, is especially intriguing, and for a rather curious reason. I have known her for more than seven years now, and seldom pass her owner's factory without catching at least a fleeting glimpse of her ; yet *I have never seen anything of her below the boiler centre-line !* The reason for this extraordinary state of affairs is that the track on which she can be seen from passing G.W.R. trains is immediately behind a timber fence about 7 ft. high, which obliterates the view of everything that is not above boiler-centre height. I have never been able to *see* what her wheel-arrangement is, though, from her size,

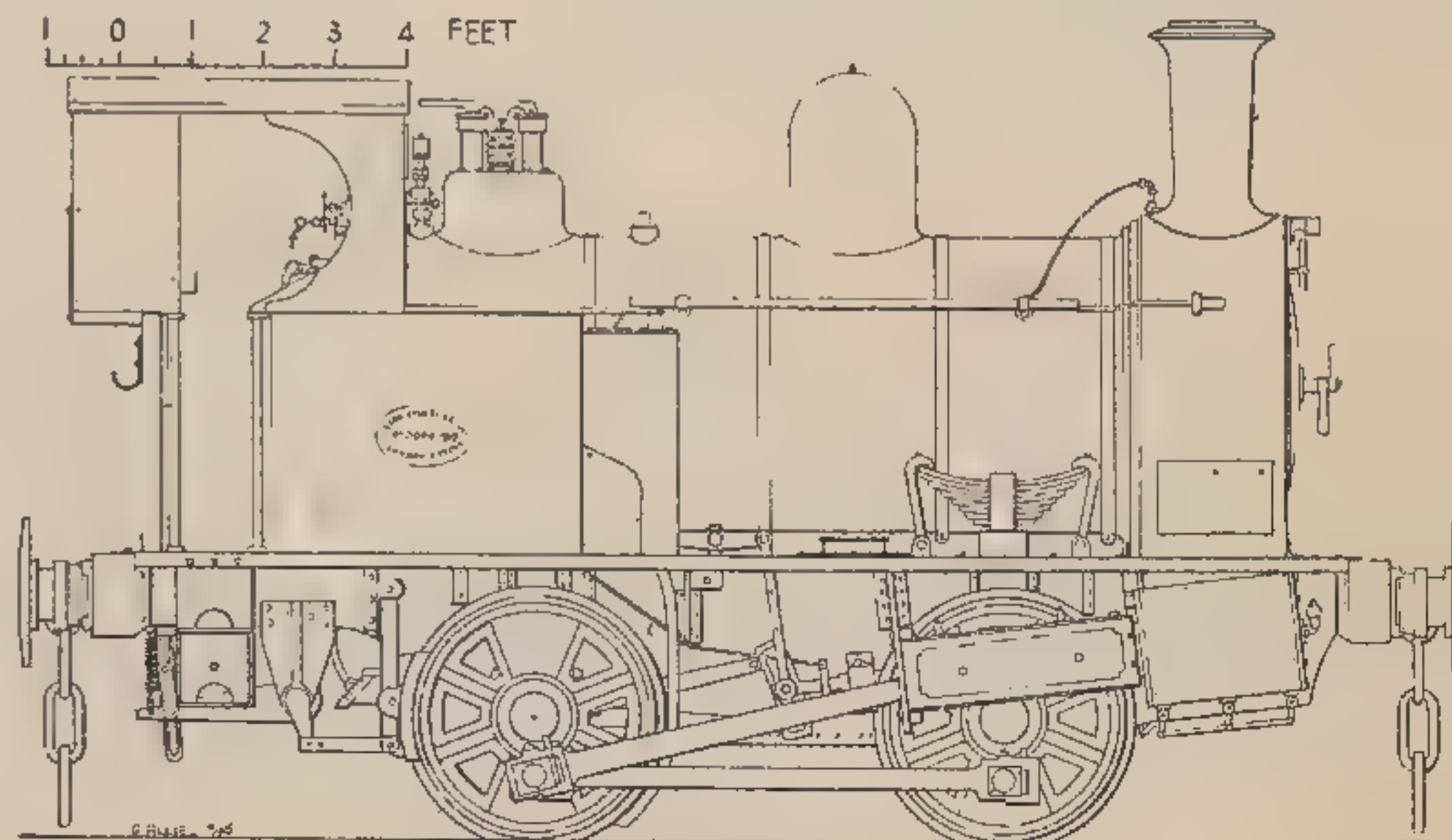
it is easy to guess that she is a 0-4-0 tank engine.

This fascinating, visible-yet-invisible little engine works at the great factory at Hayes belonging to Electric and Musical Industries Ltd., formerly The Gramophone Company ("His Master's Voice"). True, I have been in that factory more than once ; but, on each occasion the works' shunter was nowhere to be seen !

Mr. G. Alliez, Librarian of the Stephenson Locomotive Society, has been more fortunate ; he has been able to obtain sufficient information about this engine to enable him to make a drawing of her, to add to his collection of drawings of industrial locomotives. With his permission, and by courtesy of the S.L.S., I am able to repro-

duce the drawing herewith. It shows that, as I had guessed, the engine has the 0-4-0 wheel arrangement and outside cylinders ; but, for an engine of her type, she stands more than usually high, though not so high as a normal main-line engine. She runs on the standard 4 ft. 8½ in. gauge, but her short wheelbase ensures that she will negotiate very much sharper curves than are met with on any main line.

The engine is painted a very dark green, the technical name of which is, I believe, "invisible green" ; smokebox, chimney and main frames are black, and I think the wheels also are black, though I am not quite certain of this. The handrails and the beadings round the cab windows are,



The H.M.V. engine

presumably, made of brass, but they are chromium-plated—unusual in a locomotive. They are kept well polished and are always very conspicuous. In fact, the engine has the appearance of being well cared for, and I imagine that the engineman in charge of her finds ample time in which to keep her clean. Incidentally, I have never seen more than one man on the footplate.

The leading particulars of the H.M.V. engine are: cylinders, 14½ in. diameter by 20-in. stroke; wheels, 3 ft. 4 in. diameter; the boiler contains 147 tubes of 1½ in. diameter and has a total heating surface of 538 sq. ft. The wheelbase is 6 ft. 6 in., and the length of the engine, over buffers is 19 ft. 10 in. The water capacity is 320 gallons, carried in a well-tank slung below the boiler-barrel. A curious feature is that the valve-gear is placed immediately behind the wheels and in front of the frames, as can be clearly discerned in the drawing. The boiler pressure is 160 lb. per sq. in.

This interesting engine was built by Kerr, Stuart & Co. Ltd., of Stoke-on-Trent, in 1918. According to the *Journal of the Stephenson Locomotive Society*, she was delivered to the Naval Stores Officer, Beachley Junction, Chepstow, by whom she was numbered I.W.D. 3009. A little while later, she passed into the hands of Joseph Pugsley, machinery merchants, of Cattybrook Ironworks, Bristol, by whom she was sold in 1920 to her present owners. It is reported that, at one time, she carried the name *The Master*.

PRE-GROUPING RAILWAY COACHES. No. 6

Great Eastern Railway Suburban Stock

By P. E. BARNES

THE very cheap workmen's fares enforced by Parliament (Enfield—10½ miles out—2d. return)! led to such a state of congestion that in 1899 some new stock was introduced seating six passengers a side, and this was so successful that the principle was applied to all the suburban lines, some of the stock being new and the balance being provided by widening older coaches. For a description of the conversion see the *Locomotive*, or other technical journals for 1903.

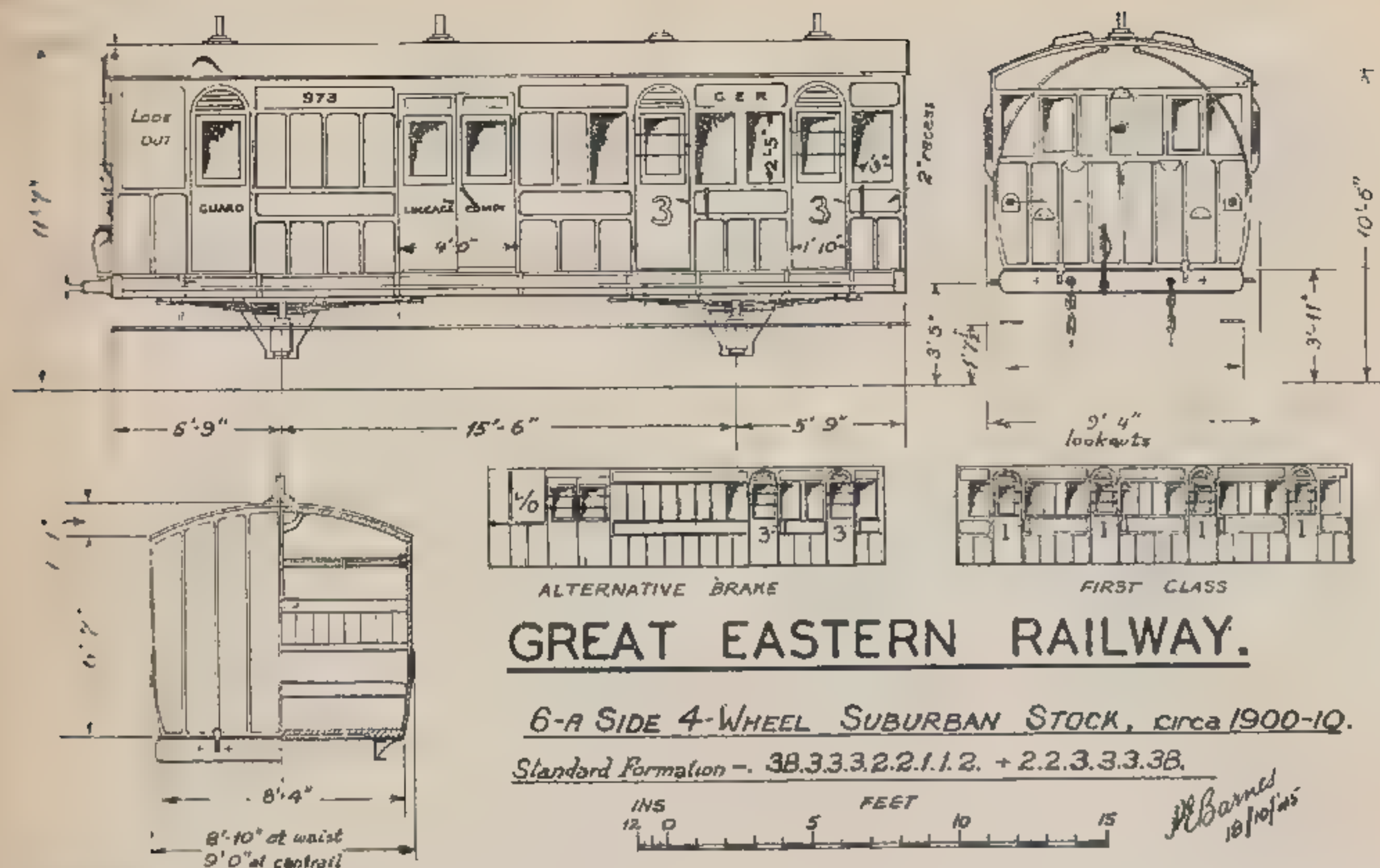
Various Sets

The trains were close coupled in various combinations, with normal buffers and couplings at one point so that shorter trains could be run at slack periods. The drawing shows the Ilford line sets, but other routes had sixteen coach trains, of which four to six coaches could be detached to form short sets with all classes represented.

From 1911 onwards a number of bogie sets were made up by mounting two bodies on a 54-ft. underframe, and the unconverted four-wheelers were relegated to the Woolwich lines, the nine-coach portions of the Ilford line sets being used with a six-wheeled main line brake at the London end. After the grouping, new articulated trains came in, and the older stock moved down a step, the last four-wheelers being replaced about 1928-30 by five-coach sets made up out of the "lengthened" bogie sets, still with the six-wheeled brake.

Unwelcome passengers

The second- and third-class coaches had each five compartments, of which usually two or three were smokers, and had torpedo ventilators in the roof. In the thirds the partitions were only carried up to about 5 ft. from the ground, except between smokers and non-smokers, and the luggage racks were common to two compartments. This made the coaches the happy hunting ground of wandering musicians, who could extort payment from three compartments



GREAT EASTERN RAILWAY.

6-A SIDE 4-WHEEL SUBURBAN STOCK, circa 1900-10.

Standard Formation - 3B.3.3.3.2.2.1.1.2. + 2.2.3.3.3.3B.

between each pair of stations, and by travelling all day on one ticket, did quite well until protests forced the company to brush the dust off some of its by-laws and put an end to it.

The colouring was a dirty brown imitation of teak, with large numerals on the doors, but about 1918 the colouring and style of lettering of the M.R. were adopted, and for a time the narrow top panels were painted blue or yellow for second or first class respectively.

The interior finish was black leather-cloth, with rather crudely grained and varnished wood in the thirds, red plush and oak in the seconds and the firsts were finished in walnut with red leather in the smokers and dark blue cloth in the non-smokers.

There were a few variations between different batches, particularly in the paneling, some coaches having a large raised medallion on the lower panel of the door to carry the class numeral. The smokers

were shown by a frosted label on the window to the right of the door.

A special link-and-pin coupling was used, and one buffer was omitted, being replaced by a circular casting on the headstock. The couplings were continued on the bogie stock, but with pairs of short buffers.

Code Letters

An elaborate system of code letters was used to identify the sets. Apparently each set was given a letter, one portion having this repeated (e.g., A and AA). Each route had a fresh series, the differentiation being made by a second letter showing the route (E for Enfield, I for Ilford, W for Woolwich, C for Chingford, L for Loughton). I think that numerals were only used for the bogie trains, those made up by remounting four-wheelers being numbered I-1 to I-12, later taking numbers from about W-50 onwards when remarshalled and sent to the Woolwich routes. Sets normally kept very much to their own territory, except for the occasional mixing up of I and L trains which travelled round the Fairlop loop. Furthermore, each set kept its identity, and if a vehicle was taken off for repair either a similar coach marked "Spare" took its place until it was returned to traffic or some odd, and usually unsuitable, vehicle was used temporarily. The lavatory composite in No. 3 of this series was often used this way, with a drastic cut in the seating capacity. Brake vans were usually replaced by a six-wheel vehicle seating 30 instead of 84!

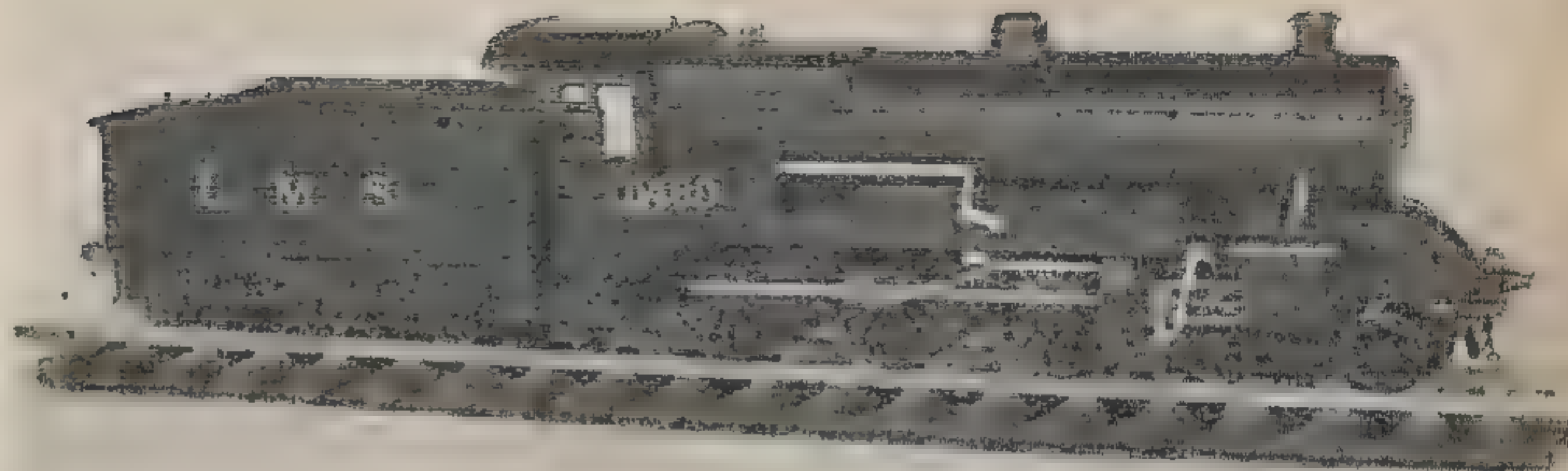
A Collection of "O" gauge Locomotives

by

S. SUTCLIFFE

NO. 1

A 7 mm. scale "HUGHES"
4 - 6 - 0



FOLLOWING the amalgamation of the Lancashire & Yorkshire Railway with the London & North Western, these engines were called upon to handle the premier Scotch Express out of Euston for a time, a task which they performed with merit, and it seems a pity that they have disappeared so rapidly. The remaining few are, I believe, all shedded at Blackpool, and work mostly between there and Manchester, Blackburn, Preston, etc., although one was observed at Halifax working a train of empties to Low Moor last year.

The model illustrated herewith was recently completed for me by Mr. Dennis Wilkinson, of Blackpool, and is a faithful reproduction of one of the 1924 built engines of the later type. She took 117½ hours to build, and is complete with sprung oval head buffers, dummy screw couplings, bogie rivets, sandboxes, sanding pipes, etc.

Construction is of brass and tinplate, and the mechanism is a Bassett-Lowke clockwork, controlled speed mechanism. The speed control has been ingeniously made to work by turning the reversing wheel in the cab, and to do this it was necessary to put the wheel on the right hand (or wrong side) of the cab, and similarly the reversing rod is shown on the wrong side of the locomotive. In any case this was necessary otherwise it would have fouled the keyhole, and this is just about the only thing one could criticise unless it is that the wheels on the mechanism are about 1 millimetre under size.

Painting was done for me by Mr. R. E. Wall, of Super Scale Models, 3, Gibbet Street, Halifax, and the painting is a matt

cellulose black (unlined). The photograph was by Sgt. Swaby, of Halifax.

The leading bogie is a new idea, and is fully sprung with leaf springs. It is designed to allow sideplay, but no lifting from the track, and she will negotiate 3-ft. radius curves easily without any suggestion of fouling the cylinders. In fact, on preliminary trials she actually traversed a 2-ft. radius tinplate curve. The bogie wheels presented some trouble—a set of four steel or cast-iron being required not larger than 20 millimetres, but eventually a nice set of four cast-iron were found in the junk box.

When the building of this locomotive was first contemplated, we set about getting the drawings and hunting out photographs,
(Continued on page 18)

WEST KILBRIDE

PROTOTYPE DETAILS OF A SMALL BRANCH LINE STATION LAYOUT

Station entrance



The Glasgow platform

by Harold D.
PINNINGTON

THESE notes are intended to be some-
after the style of the "Small Station
Layouts" from the pen of "Precedent"
which used to delight us all in pre-war days.
I can only hope that he will consider that
imitation is the sincerest form of flattery.

Perhaps it may be of interest if I explain
how the photographs came to be taken,
and the data collected. My brother and I
were in the same unit of the army together,
and it so happened that our unit was
stationed, for a time, at West Kilbride, in
Ayrshire, Scotland. Readers may remem-
ber seeing "Letters to the Editor" in
the old days, which appeared over the
signature of my brother, Mr. G. R. Pin-
nington and were accompanied by photo-



Platform for Fairlie and Largs

graphs of his "OO" gauge line; so naturally, we were both very interested in the railway station which served our location.

West Kilbride is a little seaside town on the banks of the Clyde, just north of Saltcoats and Ardrossan. The station is on the branch-line from Glasgow (St. Enoch's) to Largs; in fact, it is very nearly at the end of this line, there being only one more station (Fairlie) before the terminus is reached at Largs, itself.

The Army, of course, had quite a bit to do with the local railway station—even apart from the regard with which each soldier regarded it as being the starting place for "Leave" (not to mention half-day trips to Glasgow). For my part, I have

vivid memories of one occasion, shortly after our arrival in that part of the world, when the "R.Q." had a party of us detailed for a whole day's work in the station-yard, unloading several vans full of the unit's stores. A very pleasant "fatigue" for any railway enthusiast!

Now, my brother became engaged to one of the lassies of the town (it's an old Army Custom!) and, therefore, having decided that West Kilbride should have a *very* special place in his affections, what more natural than that it should be decided between the two of us that our post-war construction plans must include a model of West Kilbride station?

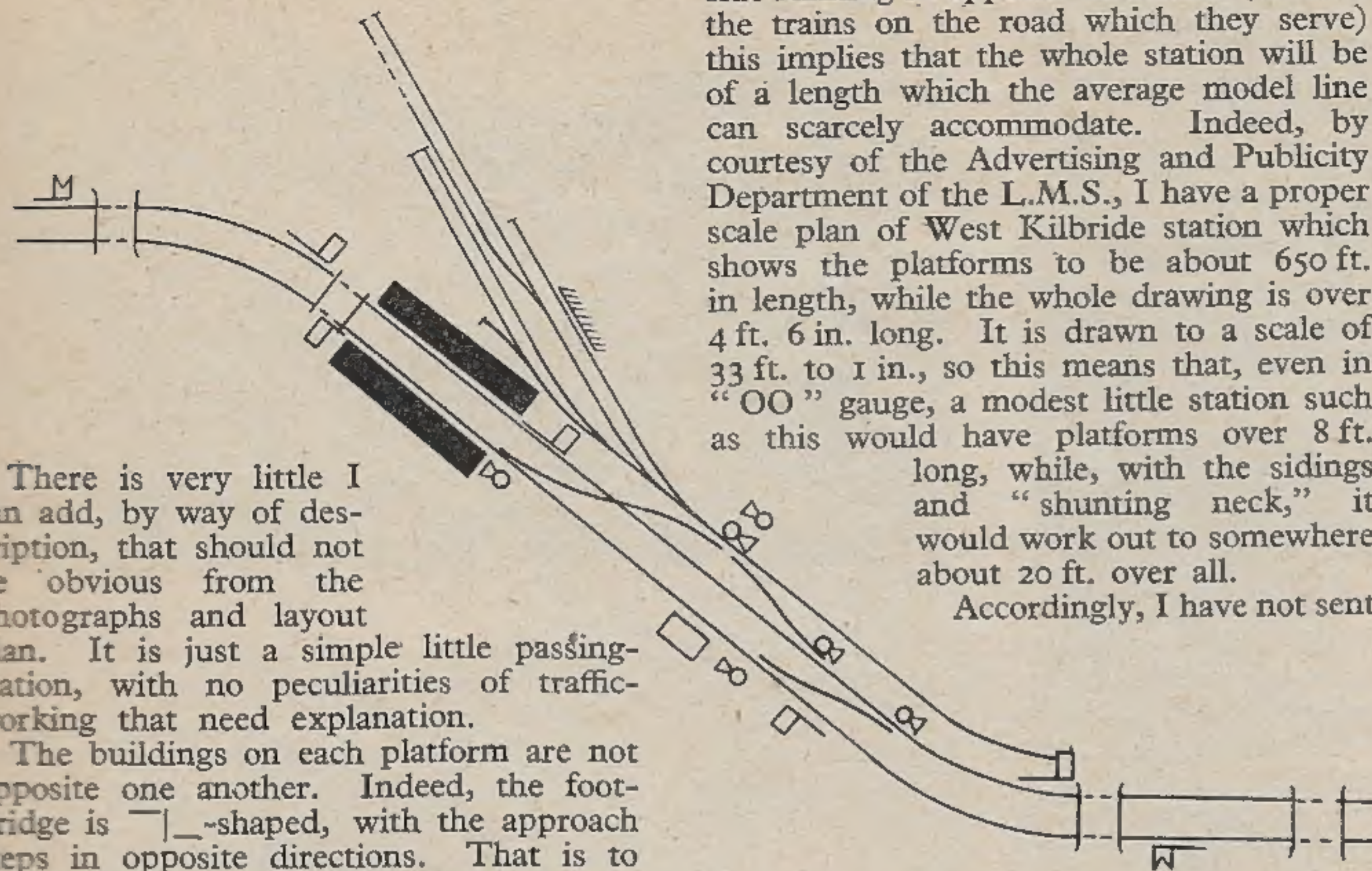
We took advantage of a fairly lengthy stay in that area to collect the data which is



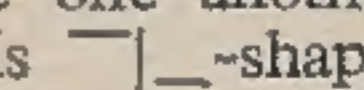
Goods shed and sidings

summarised here, although, out of deference to the defence and security restrictions, we did not venture to take any photographs until after the cessation of hostilities. Since, by that time, my brother had married the lady aforementioned, he is now very busy, in consequence, over getting his new home properly organised, and his model-making has, therefore, had to be postponed for the time being. (Probably until their baby son—at present six months old—has grown a little bigger and demands a "puffer-train!")

Still, having collected all particulars, we are passing them on, in the hope that they will be of interest to other model-makers, instead of lying in our own private file until we are ready to use them.



There is very little I can add, by way of description, that should not be obvious from the photographs and layout plan. It is just a simple little passing-station, with no peculiarities of traffic-working that need explanation.

The buildings on each platform are not opposite one another. Indeed, the foot-bridge is -shaped, with the approach steps in opposite directions. That is to say the bridge itself is about in the centre of the platforms, with the buildings on each individual platform reached by a train travelling in that direction *before* it passes under the bridge.

This little feature is, I find, more common in full-size practice than on model stations, which usually have everything arranged with depressing symmetry. However, if the footbridge is in the centre of the platform length, with the buildings on either

side running in opposite directions (to meet the trains on the road which they serve) this implies that the whole station will be of a length which the average model line can scarcely accommodate. Indeed, by courtesy of the Advertising and Publicity Department of the L.M.S., I have a proper scale plan of West Kilbride station which shows the platforms to be about 650 ft. in length, while the whole drawing is over 4 ft. 6 in. long. It is drawn to a scale of 33 ft. to 1 in., so this means that, even in "OO" gauge, a modest little station such as this would have platforms over 8 ft. long, while, with the sidings and "shunting neck," it would work out to somewhere about 20 ft. over all.

Accordingly, I have not sent

Track layout and signalling

this "official" plan for reproduction. When reduced to a size to suit even the newly-enlarged pages of THE MODEL RAILWAY NEWS, much of the detail thereon would be indecipherable. Instead, I have contented myself with the schematic diagram herewith. This shows the layout, and the signalling, but the actual dimensions can be adapted by the modeller to suit his own requirements.

Continued from page 15

A Collection of "O" gauge Locomotives

etc. Drawings were obtained from two leading firms specialising in blue prints, but one of these of the rebuilt version of these locomotives was badly at fault. It looked wrong at the front end, and investigations, coupled with the assistance of Blackpool Sheds, where these locomotives are housed, proved that the drawing was about 8 millimetres out in the smokebox area. It appeared that in the drawing, the shorter bogie wheelbase had been adopted, which has been chosen in the model to assist on curves, and a corresponding slice had been taken off frames and smokebox which is not correct. Drawings have since appeared in THE MODEL RAILWAY NEWS, by R. W. Rush, and in *Railways*, Vol. VII, "Locomotives of the Lancashire & Yorkshire Railway."

Tinplate was chosen for tender sides, boiler barrel, etc., as being stronger than brass weight for weight, and on a clockwork model too much weight is a handicap, whereas with an electrically driven model the converse usually applies. The mechanism which had been acquired some time previously, can easily be removed complete with cylinders, footplate and all working gear, by the removal of six small screws, but I regret to say that it is very noisy and a Lowke "Royal Scot" with a similar type of mechanism is also noisy. Both are by no means powerful.

Ex-N.E.R. Coaches

DEAR SIR,—My first letter was intended to set out a standard as a guide to those not intimately acquainted with N.E. stock; and anyone who desires to reproduce the common varieties will be correct if he confines the 49 ft. frame to the 8 ft. wide flat roofed stock and uses a length of 52 ft. for all other patterns, the width of the latter being 8 ft. 6 in., except for brakes which are 8 ft. 0 in. over body and 9 ft. 0 in. over side duckets. Your correspondents have pointed out rightly that there are vehicles which do not conform to these standards; but, apart from the thirds, they are apt to confuse the issue in the absence of a detailed list.

I would draw Mr. Horn's attention particularly to the eight-compartment thirds, of which elliptical and clerestory types exist in both lengths and are not confined to 49 ft. as he states. I am unable to check his width of 8 ft. but do not think it is frequently met with, and such records and diagrams as are to my hand at the moment show 8 ft. 6 in. for all arrangements not incorporating guards side duckets. Some of the elliptical stock with small top lights has frameless balanced drop-windows in the doors giving a larger-than-usual area of glass. The original two gas-lights mounted in the lower decks were mostly superseded by a single deep fitting on the centre-line of the clerestory, and this, in turn, has given way to electric lights in a number of cases.

The bogie stock originated in the 1880's, and the flat-roofed coaches were built up to 1906 at least. I believe the permissible width was limited on some of the older lines, but in later days these restrictions were removed or overcome by special working instructions. The clerestory appeared about 1895 and was built in such numbers during the next ten years that it remained the typical N.E. compartment

stock despite the numerous elliptical coaches since produced.

Their designer was David Bain, whose influence could also be found on the G.N.R. bogie stock, there being a considerable interplay of ideas between York and Doncaster through the medium of the East Coast Joint Stock, built at the two works. Thus, the G.N. took up the clerestory modified by domed ends for "Pullman vestibuled" coaches. In turn the N.E. used the same layout with elliptical roof for its internal main line stock, to be followed again by the G.N. which thereby produced what was destined to become the standard outline for L.N.E. vestibuled coaches until the end of the late war.

The straight-sided vehicles are not seen so much on local work. Being, in the main, corridor or vestibuled they are often used in specials or for strengthening purposes on the longer runs.

All varieties mingle well together, owing to their well-nigh uniform height to solebars and cant rails.

Manchester

Yours faithfully,
H. BELL.

Making It Clear

DEAR SIR,—I congratulate Mr. G. B. Denty on taking up the cause of that surely most ill-treated word in the English language—Clerestory. Incidentally, there is one other mispronunciation he has left out of his list—Clerres-trih.

He is right, of course; it is Clere-story, in other words, Clear-storey, because the top bit of the roof originally had glass in, and was, therefore, a clear storey. Origin—church

EDITOR'S MAILBAG...

architecture, where the nave often has a storey with no floor but containing windows, above the nave arcade, to let in light. If you take an end elevation of a church with north and south aisles, and flatten it a bit, you have the shape of a "pigeon-top" coach, though the glass has long since disappeared.

Yours faithfully,

P. R. CLARE,

Hon. Sec., Bristol Railway Circle.

Data Wanted

DEAR SIR,—I have been building a 4-mm. scale model of L.M.S. 0-4-0 saddle tank No. 7002, built by Kitsons, in 1932, and have spent several years at odd times on this engine, the motor, magnet, gears, etc., being, of necessity, home-made.

She is nearly finished, looks well, and hauling power is limited only by the available adhesive weight, but I cannot find particulars of three important items, viz.:

- (1) Cab roof ventilator and guides.
- (2) Additional side sheets in front of the side bunkers, fitted later than building date, to protect the injectors from coal (I believe).
- (3) Tank filler hinges and wing nut.

If you or any reader of THE MODEL RAILWAY NEWS could supply all or any of these details, I should be highly obliged and would willingly refund any postages, cost of photographs, etc.

I want to finish the model in time for the Manchester Model Railway Society's Exhibition in December.

Wishing yourself and THE MODEL RAILWAY NEWS all the very best.

Yours faithfully,

S. STUBBS.



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